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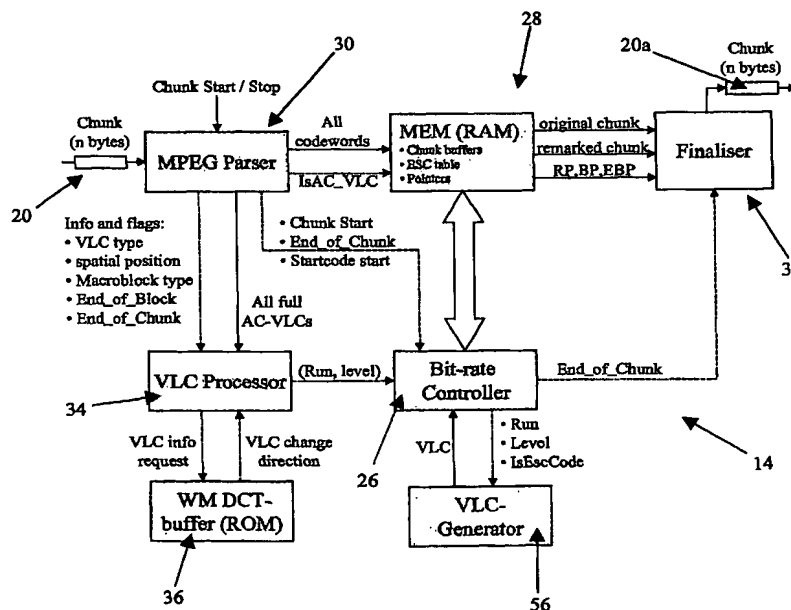
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[Continued on next page]

(54) Title: EMBEDDING A WATERMARK IN A CODED SIGNAL



(57) Abstract: Method and arrangement for water(re)marking a compressed video signal by modifying selected DCT coefficients. To avoid that the bitrate is thereby reduced too much, selected variable-length codewords are represented by escape codes. In order to avoid that ESC codes increase the bitrate too much (an ESC code is 7-21 bits longer than the corresponding VLC word), the bitrate is controlled in units of small data chunks. While a VLC is processed, a table is filled with candidate ESC codes. The bitrate controller tries to make the difference between original and processed data chunks zero by re-encoding one VLC into an appropriate ESC code.



MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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INTERNATIONAL SEARCH REPORT

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According to International Patent Classification (IPC) or to both national classification and IPC

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Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02 060182 A (KONINKL PHILIPS ELECTRONICS NV) 1 August 2002 (2002-08-01) cited in the application	
A	US 5 809 139 A (HARTUNG FRANK H D ET AL) 15 September 1998 (1998-09-15)	
A	JP 2000 244881 A (NEC CORP) 9 September 2000 (2000-09-08)	
A	HARTUNG F ET AL: "MULTIMEDIA WATERMARKING TECHNIQUES" PROCEEDINGS OF THE IEEE, IEEE. NEW YORK, US, vol. 87, no. 7, July 1999 (1999-07), pages 1079-1107, XP000914455 ISSN: 0018-9219	

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Patent family members are listed in annex.

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